

June 2001

Patterns of Ambulatory Mental Health Care in Navy Clinics

Michelle Dolfini-Reed

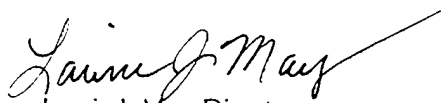


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20020503 052

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June 2001



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REPORT DOCUMENTATION PAGE

Form Approved
OPM No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources gathering and maintaining the data needed and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22302-4302, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1. AGENCY USE ONLY (Leave Blank)	2. REPORT DATE June 2001	3. REPORT TYPE AND DATES COVERED Final
4. TITLE AND SUBTITLE Patterns of Ambulatory Mental Health Care in Navy Clinics		5. FUNDING NUMBERS N00014-00-D-0700 PE - 65154N PR - R0148
6. AUTHOR(S) Michelle Dolfini-Reed		8. PERFORMING ORGANIZATION REPORT NUMBER CRM D0003835.A2/Final
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Center for Naval Analyses 4825 Mark Center Drive Alexandria, Virginia 22311-1850		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Assistant Chief for Health Care Operations (MED-03)		10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES		
12a. DISTRIBUTION AVAILABILITY STATEMENT Distribution unlimited		12b. DISTRIBUTION CODE
13. ABSTRACT (Maximum 200 words) The purpose of this paper is to describe ambulatory mental health care in Navy clinics We examined outpatient mental health visits in terms of absolute numbers, focusing on patient characteristics, clinic characteristics, and visit characteristics. We use absolute numbers instead of rates because Navy Medicine does not know definitively for how many beneficiaries it is responsible for providing care. This research provides the membership of Navy Medicine's Mental Health Executive Board with a picture of recent military beneficiary use of mental health services at Navy clinics. This analysis is for use by the Mental Health Executive Board to inform its decisions regarding the Navy's provision of mental and behavioral health services.		
14. SUBJECT TERMS Behavior, health care, medical services, medical treatment facilities (MTF), mental health, military medicine, naval personnel, outpatient clinics, TRICARE		15. NUMBER OF PAGES 61
		16. PRICE CODE
		17. LIMITATION OF ABSTRACT SAR
18. SECURITY CLASSIFICATION OF REPORT Unclassified	19. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	20. SECURITY CLASSIFICATION OF ABSTRACT Unclassified

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18
299-01

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Summary

The purpose of this paper is to describe ambulatory mental health care in Navy clinics. We examined outpatient mental health visits in terms of absolute numbers, focusing on patient characteristics, clinic characteristics, and visit characteristics. We use absolute numbers instead of rates because Navy Medicine does not know definitively for how many beneficiaries it is responsible for providing care. Our major findings for this analysis are as follows:

- *Patient characteristics.* The recipients of care associated with the majority of outpatient mental health visits tend to be:
 - Active duty members
 - Males
 - Between the ages of 18 and 44.
- *Clinic characteristics.* Nearly half of the Navy's mental health visits occurred in mental health specialty clinics; nearly 30 percent took place in primary care clinics.
 - Visits for active duty members represented nearly four-fifths of the workload in mental health specialty clinics.
 - Mental health visits for non-active-duty members tended to occur within the Navy's primary care clinics.
 - Mental health patients in primary care clinics tended to be active duty dependent adults between the ages of 18 and 44 and children age 17 and under.
 - The average number of visits per user of a mental health specialty clinic was about 3 times that of a mental health user treated in a primary care clinic.

- *Visit characteristics*

- About 55 percent of the Navy's mental health visits were for patients with a mental disorder diagnosis.
- Nearly 40 percent of the Navy's mental health visits were for patients who had a mental health V-code diagnosis (40 percent).

- *Implications*

- With respect to visits with V-code diagnoses, similarly coded visits are not covered by the MHS benefit when beneficiaries receive their treatment from a civilian provider.
- Meeting the demand for this type of care within the Navy's clinics essentially uses direct care resources that might otherwise be devoted to treating patients with more serious mental health conditions.
- Though not addressed in this report, there are real cost implications associated with providing care for patients with V-code conditions in-house while referring patients with more severe conditions to civilian providers under TRI-CARE coverage.
- The Navy should consider alternate, less costly sources of care for patients with V-code conditions, whether they are active duty or non-active-duty members.

Introduction

Purpose

The purpose of this research is to provide the membership of Navy Medicine's Mental Health Executive Board with a picture of recent military beneficiary use of mental health services at Navy clinics. This analysis is for use by the Mental Health Executive Board to inform its decisions regarding the Navy's provision of mental and behavioral health services.

The Mental Health Product Line is one of ten product line areas in which Navy Medicine wants to develop business strategies for delivering these health care products. These product lines support Navy Medicine's overall strategy for implementing the Optimization Policy of the Military Health System (MHS). The goal of the MHS Optimization Policy is to improve the health of military beneficiaries while bringing them back into the military treatment facilities (MTFs) for their care. Under optimization [1], the MHS has shifted its focus

from providing primarily interventional services to better serving our beneficiaries by preventing injuries and illness, improving the health of the entire population while reducing demand for the more costly and less effective tertiary treatment services.

In concert with this directive, Navy Medicine's optimization initiatives seek "to ensure that the right patient sees the right provider, in the right place, at the right time, with the right support and available information" [2].

Navy Medicine has established an Executive Board of mental health specialists to lead the development of the Mental Health Product Line business strategy and to serve as a change agent for optimization. The membership of the Mental Health Executive Board includes both clinical and nonclinical Navy and Marine Corps

personnel representing the Navy's diverse sources of mental health services. The goal of the board is to "improve the access to and quality of mental health care provided to military health system beneficiaries while simultaneously reducing the cost through data driven decision making" [3]. At issue for the Executive Board is establishing a comprehensive baseline understanding of mental health care, as it currently exists within the Navy and Marine Corps communities, and of delivery trends in the civilian market. This analysis supports the board's work toward its goal by providing data that reflect recent clinical delivery of mental health care within the Navy's MTFs. Specifically, I analyze recent beneficiary use of ambulatory mental health services in Navy clinics.

Background

Navy Medicine exists within two systems: the Military Health System and the U.S. health care system. As part of the MHS, Navy Medicine has two missions. The first is the readiness mission to provide care for U.S. active duty members who become sick or injured during military engagements. The second is the peacetime mission, which includes maintaining the health of U.S. military personnel and supporting the provision of the military health benefit to active duty dependents, retirees and their dependents, and survivors.

As part of the U.S. health care system, Navy Medicine also contends with the challenges of providing health care in a system undergoing many changes. In the area of mental health services, the U.S. mental health service system is organized informally and represents a broad array of services and treatments. A variety of caregivers treat mental disorders and mental health problems, working in a diverse number of facilities, both public and private, that exist independently and whose services are, at best, loosely coordinated. Collectively, researchers refer to this structure as the *de facto mental health service system* [4, 5]. As such, Regier and his associates [4, 5] note that the system has four major components: a specialty mental health sector, a general medical/primary care sector, a human services sector, and a sector of voluntary support networks.

Likewise, the Navy's *de facto mental health service system* contains similar sectors. Navy Medicine is responsible for the specialty mental health sector and the general medical/primary care sector. The Navy's human service sector includes the Navy Chaplain Corps' religious and counseling services and a number of special programs that mostly fall under the cognizance of the Bureau of Navy Personnel. Examples of the latter include the Exceptional Family Member Program, the Family Advocacy Program, the Sexual Assault and Victim Intervention (SAVI) Program, Stress and Anger Management training, the Emotional Cycles of Deployment, and the Personal Responsibility and Values Education Training (PREVENT) program.¹ In addition, a wide array of resources makes up the Navy and Marine Corps' voluntary support network. Examples include the Navy Family Ombudsmen program, the Marine Corps Key Volunteer Network, the naval services' *FamilyLine*, and the Navy-Marine Corps Relief Society [6].

For this study, I am focusing on the use of services provided by Navy Medicine's specialty mental health sector and the general medical/primary care sector. As part of the Military Health System, Navy Medicine essentially runs a staff-model HMO. At the end of FY99, the Navy's direct care system served a population of approximately 272,000 TRI-CARE Prime enrollees² and 553,760 active duty members in the Navy and Marine Corps.³ As defined by the military health care benefit, Navy Medicine provides comprehensive health care, including free prescription medicine and over-the-counter drugs, to its enrollees and, on a space-available basis, to its other eligible beneficiaries. Under the current MHS Optimization Policy, enrollees are to be assigned to a primary care manager by name, and each *full-time* primary care manager is to have an enrollee panel of about 1,500 patients [7].⁴

1. The Marine Corps has similar programs that fall under its personnel division.
2. Navy enrollment figure provided by MED-08.
3. Data are from CNA longitudinal data files for Navy and Marine Corps active duty members.
4. For some primary care managers, the number of enrollees is lower because of other demands, such as readiness and graduate medical education responsibilities.

Within Navy Medicine's direct care system, beneficiaries usually receive specialty mental health care from mental health specialists through a number of referral points, including physicians, military chaplains, the Navy Family Service Centers, and military unit commanders. Navy Medicine's mental health care staff includes psychiatrists, clinical psychologists, psychiatric nurses, licensed clinical social workers, and drug and alcohol counselors. Beneficiaries also may access mental and behavioral health services from a civilian network of providers (see appendix A). This paper focuses on the ambulatory mental and behavioral health services provided through the Navy's outpatient clinics.

Data

To examine the use of ambulatory mental health care, I use Navy Medicine's administrative visit data, collected using the Ambulatory Data System (ADS), and reported on the Standard Ambulatory Data Record (SADR) for FY99. The ADS data provide Navy Medicine with an archive of detailed clinical information (including *Current Procedural Terminology* codes and patient diagnoses using the *International Classification of Diseases, 9th Revision, Clinical Modification*) for each recorded ambulatory encounter that results in a patient visit. Ambulatory encounters include scheduled appointments, walk-ins, sick call, telephone consultations, no-shows, appointments canceled by the facility, and appointments canceled by the patient. We define a visit as an ambulatory encounter corresponding to a scheduled appointment, walk-in, or sick call. This definition is consistent with that used by the Centers for Disease Control and Prevention/National Center for Health Statistics in [8] and [9].

Ambulatory encounters recorded in the SADR include outpatient and inpatient visits. As defined in [10], outpatient visits include the following:

- All visits to a separately organized clinic or specialty service made by patients who are not currently admitted to the reporting MTF as an inpatient

- Each time medical advice or consultation is provided to the patient by telephone (if documented in the patient's chart)
- Each time a patient's treatment or evaluation results in an admission and is not part of the preadmission or admission process
- Each time all or part of a complete or flight physical examination, regardless of type, is performed in a separately organized clinic
- Each time an examination, evaluation, or treatment is provided through an MTF sanctioned health care program, in the home, school, work site, community center, or other location outside a DoD MTF by a health care provider paid from appropriated funds
- Each time one of the following tasks is performed when not a part of routine medical care, when the visit is associated with or related to the treatment of a patient for a specific condition requiring follow-up to a physical examination, and when the medical record is properly documented:
 - Therapeutic or desensitization injections
 - Cancer detection tests
 - Blood pressure measurements
 - Weight measurements
 - Prescription renewals.

Also as defined in [10], inpatient visits include

each time an inpatient is seen within the admitting MTF, on a consultative basis in an outpatient clinic...or each time contact is made by the clinic or specialty service members (other than the healthcare provider from the treating clinic or specialty service) with patient on hospital units or wards, when such services are scheduled through the respective clinic or specialty service.

Services that are not recorded as visits include occasions of service that do not include an assessment of the patient's condition or the exercise of independent judgment as to the patient's care, ward

rounds, grand rounds, group education and information sessions, and care from nonappropriated fund providers.

The ADS data present the best available clinical record of all ambulatory encounters experienced by eligible beneficiaries in the Navy's clinics. However, the data do not capture all such encounters, and not all records in the ADS data are complete. The quality of the data depends on the level of attention that military clinicians and their staff devote to completing the data collection process. Consequently, some measurement and data collection error occurs in these data and will be present in this analysis. In addition, clinicians aboard ships or assigned to battalion aid stations or other field units do not use ADS because it is not installed in these work areas. These sites essentially serve as the primary care setting for active duty Sailors and Marines. Therefore, the result is an underreporting of ambulatory visits for active duty members in the SADR data, particularly in the primary care setting.

Organization of the report

I have organized the analysis as follows. First, I describe the criteria that I use to identify mental and behavioral health visits in Navy clinics, taking into consideration definitions offered in the literature. Next, I describe my population of interest in this study and compare it with the Navy's in-catchment populations of eligible beneficiaries and users of the Military Health System. I follow with a description of the general demographics for patients with mental health visits in Navy clinics during FY99, focusing on such characteristics as age, sex, beneficiary status, and TRICARE Prime enrollment status.

I then provide an overview of the characteristics of clinics in which mental health visits occurred during the year. I examine the extent to which mental health visits tend to occur in mental health specialty clinics versus other types of clinics, such as primary care or other specialty clinics. I also provide data on types of facilities in which visits took place (i.e., major medical center, family practice teaching program, community hospital, or ambulatory care centers).

Finally, I consider specific visit characteristics. Of particular interest is the proportion of the visits that are for new versus established patients. I examine visits in terms of the types of cases being treated. To what extent is the visit workload concentrated in treating patients diagnosed with serious mental illness, dementias and other cognitive disorders, other mental illness, substance abuse disorders, or other supplemental classifications of mental and behavioral health factors? In what types of clinics are these different categories of mental health cases being treated? I conclude with a discussion of the patterns that we can distinguish in mental health visits and suggest ideas for further study.

Identifying mental and behavioral health visits

I define mental and behavioral health visits as all visits to a Navy specialty mental health clinic, regardless of diagnosis, and all other visits containing at least one of the following in the patient visit record:

- A mental disorder diagnosis as defined in the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) [11]
- A supplemental classification of mental or behavioral health factors influencing health status and contact with health services (the V-codes), also found in [11]
- A psychiatric diagnostic or evaluative interview procedure as defined in the *Current Procedural Terminology* (CPT) [12], regardless of diagnosis
- A psychiatric therapeutic procedure (also found in [12]), regardless of diagnosis.

Hereafter, I refer to the above four categories as mental disorder, mental/behavioral health factor, and psychiatric procedure (items 3 and 4). Appendix B contains a detailed list of the specific diagnostic and procedure codes corresponding to these categories.

The SADR contains up to four diagnosis codes and up to four procedure codes in each visit encounter record.⁵ For identification purposes, I classify a visit as a mental or behavioral health visit regardless of whether the relevant diagnosis or procedure code is listed in the primary, secondary, tertiary, or quaternary positions. In addition, in the identification process, I count each visit only once regardless of

5. The SADR visit data record also includes a separate Evaluation and Management (E&M) code, which I do not screen for this selection process. There is no overlap between the E&M codes and the CPT psychiatry diagnostic, evaluation, and therapeutic procedure codes.

whether the record contains a single qualifying mental health classification factor or multiple qualifying factors. After identifying all visits that occurred in a mental health specialty clinic, I screened the remaining records in the following order:

- By primary diagnosis for a mental disorder
- By secondary through quaternary diagnosis for a mental disorder
- By primary diagnosis for a mental health V-code
- By secondary through quaternary diagnosis for a mental health V-code
- By first through fourth listed CPT4 code.

I identified the visit as a mental health visit for the first indicator on which a match occurred using the above screening process. During FY99, Navy Medicine SADR data reported a total of nearly 6.9 million ambulatory visit encounters. I identified slightly over 572,000 of these visits (about 8 percent of total visits) as mental health visits (see table 1).⁶ The primary diagnosis on the visit record served as the qualifying identification factor for nearly 73 percent of these visits, with nearly one-half qualifying with a primary diagnosis of a mental disorder. In addition, a small number of visits (1 percent) that occurred in a mental health specialty clinic did not have a mental health diagnosis or procedure code. We refer to these as “other visits in mental health specialty clinics” in table 1.

The recent literature on the use of mental health services provided guidance on defining mental disorders and behavioral problems. I found that most sources tend to focus on specific aspects, such as serious mental illness, serious emotional disturbances, mental illness and disability, or mental health/substance abuse (MH/SA). For example, the Centers for Disease Control and Prevention/ National Center for Health Statistics (CDC/NCHS) narrowly focus on the major disease category of mental disorders as defined in the ICD-9-CM, relying only

6. As noted in the previous section, I define an ambulatory visit as an encounter corresponding to a scheduled appointment, walk-in, or sick call. For this analysis, I do not include telephone consults, which numbered 72,410 for Navy ambulatory mental health visits in FY99.

on the primary diagnosis listed for the reported visit [8, 9]. Kessler et al. [13] restrict their analysis to serious mental illness as defined by the Substance Abuse and Mental Health Services Administration (SAMHSA) [14]. SAMHSA's definition keys on the notions of disorder and functional impairment, where disorder is defined as

any mental disorder (including those of biological etiology) listed in the DSM-III-R or their ICD-9-CM equivalent (and subsequent revisions), with the exception of DSM-III-R "V" codes, substance use disorders, and developmental disorders, which are excluded, unless they co-occur with another diagnosable serious mental illness.⁷

Finally, Larson et al. [15] included both mental health and substance abuse disorders and included all visits with:

- A primary diagnosis of MH/SA disorders
- An MH/SA procedure (regardless of diagnosis)
- A specialty MH/SA provider (regardless of diagnosis or procedure).

Table 1. Total mental health visits by qualifying identification factor, in Navy clinics, fiscal year 1999

Qualifying identification factor	Number of visits	Percentage distribution
Primary diagnosis, mental disorder	278,454	48.7
Other diagnosis, mental disorder	30,913	5.4
Primary diagnosis, mental/behavioral health factor	137,026	23.9
Other diagnosis, mental/behavioral health factor	93,217	16.3
Psychiatric procedure	26,908	4.7
Other visits in mental health specialty clinics	<u>5,619</u>	<u>1.0</u>
Total mental health visits	572,137	100.0

Based on this array of approaches, I identify mental and behavioral health visits in a manner that provides the most comprehensive

7. SAMHSA applies a similar definition of disorder for children with a serious emotional disturbance.

classification of such visits. Comparatively, the definition that I use is broad but allows the flexibility to examine mental and behavioral health visits in the variety of subcategories just mentioned.

Defining the population of interest

For the purposes of this analysis, I narrow my population of interest to those who receive ambulatory mental health services through the Navy's clinics, hereafter referred to as MTF mental health (MH) users. MTF MH users generally represent a subset of all those eligible for the military health care benefit who live in the catchment areas of the Navy's medical treatment facilities. Persons eligible for the military health care benefit include all active duty members, non-active-duty dependents, retirees, retiree dependents, and survivors. During FY00, the Navy's in-catchment eligible population totaled slightly fewer than 1.9 million people.⁸ Of these eligibles, about 80 percent are users of the military health care benefit—a user being one who receives care either from the Navy MTF or from a civilian provider under TRICARE Prime, Extra, or Standard coverage. Navy Medicine does not know definitively for how many beneficiaries it is responsible for providing care because beneficiaries may access care through either the MTFs or civilian providers under TRICARE Extra or Standard coverage without being enrolled. Consequently, I am not able to calculate rates but rather report absolute numbers and averages per MTF MH user. Only 14 percent of the MHS users (11 percent of the Navy's eligible in-catchment population) had some type of mental health visit to a Navy MTF during FY99.

Tables 2 and 3 compare data on the Navy's in-catchment eligible and user populations with MTF MH users, identified by age, sex, and beneficiary category. Initially, we are classifying patient age rather broadly in categories that conceptually correspond to the military beneficiary categories and that simplify the presentation of the data. Later in the

8. In-catchment eligible and user population estimates are from MCFAS and were provided by MED-31. These estimates include any eligible or user regardless of service affiliation (Army, Navy, Air Force, or Marine Corps).

analysis, we will examine visit characteristics using more narrow age categories. Overall, the Navy's eligible, user, and MTF MH user populations tend to be males and relatively young, with about four-fifths of each group being under age 45. The relative percentage of MHS users and MTF MH users who are 65 and older (4.9 and 4.6 percent, respectively) is much lower than the relative distribution of this age group (nearly 13 percent) among total eligibles. Furthermore, 18- to 44-year-olds represent two-thirds of the MTF MH users, suggesting that these patients are more likely to be either active duty members or their spouses. Table 3 confirms this likelihood.

Table 2. Comparison of eligible beneficiaries and MHS user beneficiaries living in Navy MTF catchment areas^a with MTF mental health users,^b by patient age, sex, and beneficiary status, FY99^c

	Eligibles		Users		MTF MH users	
	Number	Percent	Number	Percent	Number	Percent
Total	1,885,955	100.0	1,508,775	100.0	214,653	100.0
Age						
0-17 years	455,588	24.2	403,477	26.7	36,164	16.8
18-44 years	856,082	45.4	800,511	53.0	142,955	66.6
45-64 years	335,578	17.7	231,210	15.3	25,739	12.0
65 years and older	238,707	12.7	73,577	4.9	9,795	4.6
Sex and age						
Female	840,979	44.6	649,712	43.1	92,397	43.1
0-17 years	223,059	26.5	197,510	30.4	14,931	16.2
18-44 years	336,251	40.0	302,443	46.5	60,791	65.8
45-64 years	164,769	19.6	113,549	17.5	12,245	13.2
65 years and older	116,899	13.9	36,209	5.6	4,430	4.8
Male	1,044,976	55.4	859,063	56.9	122,048	56.9
0-17 years	232,528	22.3	205,966	24.0	21,231	17.4
18-44 year	519,832	49.7	498,068	58.0	82,097	67.3
45-64 years	170,808	16.3	117,661	13.7	13,400	11.0
65 years and older	121,808	11.7	37,367	4.3	5,320	4.3

a. Figures for eligible beneficiaries and MHS user beneficiaries living within Navy MTF catchment areas represent FY00 estimates. These estimates are from MCFAS, provided by MED-31.

b. Figures for MTF mental health users are for FY99.

c. The visit numbers corresponding to the age, sex, and beneficiary category stratifications do not sum to the total number of mental health visits because of missing data for these variables.

Table 3. Comparison of eligible beneficiaries and MHS user beneficiaries living in Navy MTF catchment areas^a with MTF mental health users^b, by beneficiary status and patient age,^c FY99

	Eligibles		Users		MTF MH users	
	Number	Percent	Number	Percent	Number	Percent
Total	1,885,955	100.0	1,508,775	100.0	214,653	100.0
Active duty	513,952	27.3	513,952	34.1	103,787	48.4
0-17 years	2,290	0.4	2,290	0.4	137	0.1
18-44 years	496,734	96.6	496,734	96.6	100,427	96.8
45-64 years	14,904	2.9	14,904	2.9	3,125	3.0
65 years and older	24	^d	24	^d	98	0.1
Active duty dependents	582,208	30.9	556,430	36.9	69,663	32.4
0-17 years	342,429	58.8	327,225	58.8	32,858	47.2
18-44 years	222,796	38.3	212,988	38.3	33,434	48.0
45-64 years	15,228	2.6	14,531	2.6	3,105	4.4
65 years and older	1,755	^d	1,686	^d	266	0.4
Retirees, retiree dependents, and survivors	789,795	41.9	438,394	29.1	33,813	15.8
0-17 years	110,868	14.0	73,962	16.9	2,784	8.2
18-44 years	136,553	17.3	90,789	20.7	5,835	17.3
45-64 years	305,446	38.7	201,776	46.0	15,972	47.2
65 years and older	236,929	30.0	71,867	16.4	9,222	27.3
Other eligibles	n/a	n/a	n/a	n/a	7,390	3.4
0-17 years	n/a	n/a	n/a	n/a	385	5.2
18-44 years	n/a	n/a	n/a	n/a	3,529	44.1
45-64 years	n/a	n/a	n/a	n/a	3,537	47.9
65 years and older	n/a	n/a	n/a	n/a	209	2.8

a. Figures for eligible beneficiaries and MHS user beneficiaries living within Navy MTF represent fiscal year 2000 estimates.

b. Figures for MTF mental health users are for fiscal year 1999.

c. The visit numbers corresponding to the age, sex, and beneficiary category stratifications do not sum to the total number of mental health visits due to the occurrence of missing data for these variables.

d. Less than one-tenth of one percent.

The MTFs do not have the capacity to provide care to all eligible beneficiaries. Active duty members and MTF Prime enrollees have first priority for care. All other eligibles may access care at the MTFs on a space-available basis. Consequently, even though they were not considered "official" TRICARE enrollees until FY00, active duty members, in theory, have always been "enrollees" required to receive their care from the MTFs. When identified by beneficiary category and age (see table 3), the Navy's user and MTF MH user populations are mostly active duty members between the ages of 18 and 44, active duty dependent children under the age 17, and adults age 18 to 44. Conversely, eligibles, users, and MTF MH users who are retirees, retiree dependents, and survivors tend to be 45 and older.

Overall, active duty members and active duty dependents represent a higher proportion of the Navy's in-catchment user population, compared to the relative composition of the eligible population, whereas a lower percentage of retirees, retiree dependents, and survivors use the Navy MTFs.⁹ In addition, a number of "other eligibles" are authorized to receive care in the military MTFs. Examples of other eligibles include U.S. civilian employees and their dependents, other beneficiaries of the U.S. Government (such as the Veterans' Administration, ROTC, and American Indians), and foreign nationals and their family members. In FY99, other eligibles represented only 3.4 percent of all Navy MTF MH users.

Patient characteristics

Table 4 displays information on the number, percentage distribution, and average number of mental health visits per MTF MH user by patient age, sex, and beneficiary category. We observe visit distribution patterns in table 4 similar to what we observed for individual MTF MH users in tables 2 and 3. In fact, the patterns are slightly more pronounced. Nearly three-quarters of total mental health visits for

9. Ideally, I also would like to know the composition of the relative comparison groups for non-active-duty, TRICARE Prime enrollees given that they are the focus of the MHS optimization strategy. However, the readily available Navy enrollment data did not provide detailed demographic information.

FY99 were for patients, age 18 to 44; three-fifths of the visits were for males. Categorized by beneficiary status, active duty members, nearly all between the ages of 18 and 44, also represented three-fifths of total mental health visits. The next largest combined group of visits was for active duty dependent children (age 0 to 17) and spouses (age 18 to 44). In addition, large proportions of the mental health visits are for persons enrolled in TRICARE Prime (see table 5). Over 80 percent of the visits for active duty dependents and nearly half of the visits for retiree family members were for Prime patients.

Table 4 also includes the average number of mental health visits per MTF MH user. Overall, MTF MH users had an average visit rate of 2.7 visits during FY99. Active duty members tend to have higher visit rates than other beneficiary categories, particularly for those between the ages of 18 and 64. Across population categories, MTF MH user visit rates range from 1.5 to 3.1 visits. Intuitively, these rates seem low. In the subsections that follow, we will examine these visits in more detail to determine other similarities and differences regarding the nature of these visits. The next section provides information on the characteristics of clinics in which these visits are occurring, followed by a section that presents more detailed diagnostic information regarding the nature of the Navy's mental health visits.

Clinic characteristics

Because of its military association, Navy Medicine provides health care to its beneficiaries in a variety of facilities, ranging from large hospitals to small clinics to tent-based aid stations geographically located both in the continental United States (CONUS), overseas, and aboard the Navy's ships. In this analysis, I am focusing on those mental health visits that occurred within one of the Navy's MTFs. These facilities range in size from major medical centers to small community hospitals to ambulatory care clinics. During FY99, the Navy had 140 such facilities located primarily within CONUS.

Table 4. Number, percentage distribution, and average number of mental health visits per user in Navy MTFs by patient age, sex, and beneficiary status, FY99

	Number of visits ^a	Percentage distribution	Visits per MH user
Total	544,645	100.0	2.5
Age^a			
0-17 years	64,443	11.8	1.8
18-44 years	397,770	73.0	2.8
45-64 years	60,162	11.0	2.3
65 years and older	22,949	4.2	2.3
Sex and age^a			
Female	216,809 ^b	39.8	2.3
0-17 years	25,226	11.6	1.7
18-44 years	151,707	70.0	2.5
45-64 years	29,317	13.5	2.4
65 years and older	10,559	4.9	2.4
Male	327,836 ^b	60.2	2.7
0-17 years	39,215	12.0	1.8
18-44 years	245,841	75.0	3.0
45-64 years	30,468	9.3	2.3
65 years and older	12,312	3.7	2.3
Beneficiary category and age^a			
Active duty	316,424	58.3	3.0
0-17 years	208	0.1	1.5
18-44 years	306,288	96.8	3.0
45-64 years	9,760	3.1	3.1
65 years and older	168	^c	1.7
Active duty dependents	138,625	25.1	2.0
0-17 years	58,368	42.1	1.8
18-44 years	72,353	52.2	2.2
45-64 years	7,345	5.3	2.4
65 years and older	559	0.4	2.1
Retirees, retiree dependents, & survivors	78,791	14.5	2.3
0-17 years	5,270	6.7	1.9
18-44 years	14,152	18.0	2.4
45-64 years	37,533	47.6	2.3
65 years and older	21,836	27.7	2.4
Other eligibles	11,484	2.1	1.6
0-17 years	597	5.2	1.6
18-44 years	4,977	43.3	1.5
45-64 years	5,524	48.1	1.6
65 years and older	386	3.4	1.8

a. Excludes visits with missing data in variables that were used to identify the number of MH users.

b. The visit numbers corresponding to the age, sex, and beneficiary category stratifications do not sum to the total number of mental health visits because of missing data.

c. Less than one-tenth of one percent.

Table 5. Number and percentage distribution of mental health outpatient visits by patient beneficiary category and enrollment status, FY99

	Number of visits	Percentage distribution
Total mental health visits	572,137	100.0
Active duty members	316,514	55.3
Active duty dependents	157,587	27.6
Retirees, retiree dependents, and survivors	85,806	15.0
Other eligibles	12,230	2.1
Beneficiary category and enrollment status ^a		
Active duty dependents	157,587	27.6
Prime enrollee	129,050	81.9
Senior Prime enrollee	47	b
Not enrolled	11,504	7.3
Status unknown	16,986	10.8
Retirees, retiree dependents, and survivors	85,806	15.0
Prime enrollee	39,871	46.5
Senior Prime enrollee	2,604	3.0
Not enrolled	36,614	42.7
Status unknown	6,717	7.8
Other eligibles	12,230	2.1
Prime enrollee	264	2.2
Senior Prime enrollee	4	b
Not enrolled	2,038	16.7
Status unknown	9,924	81.1

a. The visit numbers corresponding to the stratifications for beneficiary category and enrollment status do not sum to the total number of mental health visits because of missing data for these variables.

b. Less than one-tenth of one percent.

Table 6 shows data on mental health visits by the type of medical facility in which the clinic is located. I classify Navy mental health facilities into six different categories: medical centers, family practice teaching hospitals, community (small) hospitals, ambulatory care clinics, branch clinics, and Navy facilities located outside CONUS

(OCONUS). In FY99, clinics co-located at Navy Medical Centers had the largest amount of mental health visits, accounting for 28 percent of the Navy's total mental health workload. Branch clinics and family practice teaching hospitals provided nearly one-fifth of the Navy facility mental health visits. Comparatively few visits occurred in overseas facilities.

Table 6. Distribution of Navy mental health visits by type of medical facility^a in which the clinic is located, FY99

Medical facility category	Number of facilities	Number of visits	Percentage distribution	Mean % per facility
Medical centers	3	160,382	28.0	9.3
Family practice teaching hospitals	4	79,171	13.8	3.5
Community hospitals	7	107,526	18.8	2.7
Navy ambulatory care clinics	12	62,332	10.9	0.9
Branch clinics	88	127,514	22.3	0.3
OCONUS community hospitals and clinics	26	35,079	6.1	0.2
Total number of facilities	140	572,004 ^b	100.0	0.7

a. See appendix C for a list of the facilities in each medical facility category.

b. Total number of facilities does not equal total visits of 572,137 because of missing data.

Within the medical community, treated persons with mental and behavioral disorders receive their health care in many different types of general medicine and specialty care clinics. Mental health care is not the sole province of mental health specialists working within a mental health specialty clinic. Among treated MTF MH patients in FY99, about half of their visits occur within a mental health specialty clinic (see table 7).¹⁰ Another nearly 30 percent of the Navy's mental health visits occurred in a primary care clinic.¹¹ The remainder took

10. We define mental health clinics as all psychiatric and mental health care clinics falling under the Medical Expense and Performance Reporting System (MEPRS) BF category. These are psychiatry clinic, psychology clinic, child guidance clinic, mental health clinic, social work clinic, and substance abuse clinic.

11. We define primary care clinics using the following criteria, set by MED-08: internal medicine, pediatrics, family practice, primary medical care, medical examination clinic, TRICARE outpatient clinic, flight medicine clinic, and undersea medicine clinic.

place in other types of specialty clinics; among the most predominant of these were obstetrics and gynecology (OB/GYN) and community health.

Table 7. Distribution of Navy mental health visits by clinic type, FY99

Type of clinic	Number of visits	Percentage distribution	Cumulative percentage
Mental health specialty	285,545	49.9	49.9
Primary care	169,351	29.6	79.5
OB/GYN	29,373	5.1	84.6
Community health	23,994	4.2	88.8
Medical/surgical specialties	17,901	3.1	91.9
Occupational health	10,768	1.9	93.8
Emergency medicine	9,855	1.7	95.5
Other	25,350	4.4	100.0
Total	572,137	100.0	

Mental health specialty clinics serve as the source of care for nearly half of Navy Medicine's mental health visits, but the distribution of the workload across different clinics varies depending on the type of facility. Table 8 displays the percentage distribution of Navy mental health visits by facility type for FY99. Within the Navy's major medical centers, mental health specialty clinics saw slightly over 70 percent of the mental health visits, whereas primary care clinics treated only 15 percent of such visits. For facilities other than Navy medical centers, mental health visits were less concentrated in the mental health specialty clinics and occurred more frequently in the primary care clinics. Furthermore, the mental health specialty clinics served as the predominant site of care for clinics located within a hospital facility, regardless of the facility's size. However, the distribution of mental health visits was more evenly distributed between primary care and mental health specialty clinics in the Navy's ambulatory care, branch medical, and OCONUS facilities.

The distribution patterns among mental health visits by clinic type across facility raise a number of possible connections to patient demand, facility capacity levels, referral patterns, and operating efficiency. Clearly, a number of different types of clinics within Navy

Medicine are treating patients with mental and behavioral disorders. Who are these patients in terms of their demographics? What types of conditions are being seen? Are appropriate referrals occurring? Are all patients who need mental health specialty care actually receiving this care?

Table 8. Percentage distribution of Navy mental health visits for each type of medical facility by type of clinic in which the visit occurred, FY99

Clinic type	Medical centers	Family practice teaching hospitals	Navy community hospitals	Ambulatory care clinic	Branch medical clinics	OCONUS facilities
Mental health	70.1	45.5	49.3	43.1	33.0	43.3
Primary care	15.3	30.1	22.8	42.2	42.0	42.0
OB/GYN	2.2	7.9	3.9	0.1	11.7	0.9
Community health	1.2	6.1	4.6	6.9	6.2	0.2
Occupational health	0.7	0.5	3.0	1.1	4.8	0.6
Medical/surgical	7.5	2.2	2.1	1.6	0.9	2.1
Emergency medicine	2.3	2.6	2.6	a	a	3.9
Others	1.4	5.1	11.6	4.9	2.2	2.2

a. The Navy's ambulatory care and branch medical clinic facilities do not have emergency medicine clinics.

Table 9 provides information on the number of visits, their percentage distribution, and average number of mental health visits per MTF MH user by patient age, beneficiary status, and enrollment status for visits occurring in primary care clinics and for visits in mental health specialty clinics. Active duty members have the greatest realized demand for specialty mental health care within the direct care system. Other non-active-duty beneficiaries represent a larger proportion of the mental health visits occurring within primary care clinics. The average number of visits per user for those treated in primary care clinics ranges from 1.4 to 1.8; these averages are low compared with those for MH users treated in mental health specialty clinics.

Table 9. Number, percentage distribution, and mental health visits per MTF MH user by beneficiary status and patient age, FY99: mental health specialty clinics versus primary care versus both mental health and primary care

	Primary care clinics			Mental health specialty clinics		
	Number of visits	Percent	Visits per user	Number of visits	Percent	Visits per user
Total	157,117	100.0	1.5	276,183	100.0	4.3
Sex^a						
Female	80,583	51.3	1.5	84,148	30.5	4.1
Male	76,515	48.7	1.5	191,968	69.5	4.4
Age^a						
0-17 years	49,123	31.2	1.6	9,678	3.5	2.9
18-44 years	75,855	48.4	1.4	238,063	86.2	4.4
45-64 years	22,215	14.1	1.6	21,139	7.7	4.9
65 years and older	9,924	6.3	1.8	7,303	2.6	3.3
Beneficiary category^a						
Active duty	41,389	26.3	1.4	212,782	77.0	4.6
Active duty dependents	80,165	51.0	1.5	34,722	12.6	3.5
Retirees, retiree dependents, and survivors	33,980	21.6	1.7	27,016	9.8	3.9
Other eligibles	1,583	1.0	1.3	1,663	0.6	2.4
Enrollment status						
Active duty	41,389	26.3	1.4	212,782	77.0	4.6
TRICARE Prime non-active-duty	84,206	53.5	1.6	41,021	14.9	3.9
TRICARE senior Prime	722	0.5	1.6	635	0.2	2.9
Not enrolled	19,480	12.5	1.6	16,414	6.0	3.4
Unknown	11,320	7.2	1.4	5,331	1.9	2.5

a. The visit numbers corresponding to the categories of age, sex, beneficiary category and enrollment status do not sum to the total number of mental health visits because of missing data for these variables.

This lower number of MH visits per user is suggestive of a number of possibilities. First, it may be the case that patients are being referred to a mental health specialist or some other source of care, such as the Family Service Centers. They may be experiencing problems that are less severe and able to be addressed in one or two visits. Members of the Mental Health Executive Board note that because specialty mental health visits are overwhelmingly for active duty members, they refer many of their non-active-duty members to civilian specialists with whom the patient may or may not follow up. Given this anecdotal

evidence, the relatively low realized demand figures for non-active-duty members most likely reflect capacity limits in the Navy MTFs more than lower need.

Visit characteristics

Table 10 displays mental health visits by type of mental disorder or behavioral condition based on the patient's diagnostic information for each visit. Using criteria developed by Larson et al. [15], I categorize mental health conditions as serious mental illness, dementias and cognitive disorders, or other mental illness.¹² Substance abuse and "other" conditions make up the majority of the remaining mental and behavioral health conditions. Overall, approximately 37 percent of the Navy's mental health visits in FY99 were related to a mental health condition, 17 percent of the visits involved substance abuse conditions, and the remaining 46 percent were visits involving factors influencing mental health status and contact with mental health services (mental health V-codes), psychiatric procedures, or some other visit to a mental health specialty clinic.

Table 10. Mental health visits by mental or behavioral health condition

Category	Number	Percentage
Mental health conditions		
Serious mental illness	43,316	7.6
Dementias and cognitive disorders	2,265	0.4
Other mental illness	166,465	29.1
Substance abuse conditions		
Any alcohol diagnosis	74,340	13.0
Any drug diagnosis	5,366	0.9
Tobacco use disorder	17,615	3.1
Other conditions		
Factors influencing mental health status and contact with mental health services	230,243	40.2
Psychiatric procedure	26,908	4.7
Other visits to a mental health specialty clinic	5,619	1.0
Total visits	572,137	100.0

12. See appendix D for the classification scheme that I use to define mental health conditions.

Table 11 shows the top 20 mental health diagnoses (identified at the fifth-level of detail) associated with ambulatory visits to Navy clinics in FY99. Prominent among those diagnoses listed in table 11 are mental health V-codes for "other counseling," which represent 3 of the top 4 mental health diagnoses, less severe mental illness diagnoses falling under the general heading of neurotic disorders (diagnoses 300.00 and 300.4), personality disorders (diagnosis 301.9), and other nonpsychotic mental disorders (diagnoses 301.9, 307.81, 309.0, 309.9, 311, 314.00, 314.01), as well as alcohol and substance abuse diagnoses.

Table 11. Top 20 diagnoses^a associated with ambulatory visits to Navy clinics, FY99

Code	Mental health diagnosis	Frequency	Percentage	Cumulative percentage
V65.4	Other counseling, not elsewhere classified	83,158	14.5	14.5
V65.49	Other specified counseling	55,043	9.6	24.2
303.90	Other and unspecified alcohol dependence, unspecified	52,512	9.2	33.3
V65.40	Counseling NOS	31,314	5.5	38.8
311	Depressive disorder, not elsewhere classified	31,210	5.5	44.3
305.1	Tobacco use disorder	17,519	3.1	47.3
296.20	Major depressive disorder, single episode, unspecified	14,548	2.5	49.9
314.01	Attention deficit disorder, with hyperactivity	13,845	2.4	52.3
V71.0	Observation for suspected mental condition	13,531	2.4	54.7
305.00	Alcohol abuse, unspecified	12,317	2.2	56.8
V62.2	Other occupational circumstances or maladjustment	12,28	2.1	58.9
300.00	Anxiety state, unspecified	11,540	2.0	61.0
296.30	Major depressive disorder, recurrent episode, unspecified	11,375	2.0	63.0
309.0	Brief depressive reaction	10,158	1.8	64.7
V62.89	Other psychological or physical stress not elsewhere classified, other	9,215	1.6	66.3
300.4	Neurotic depression	8,964	1.6	67.9
314.00	Attention deficit disorder, without mention of hyperactivity	8,540	1.5	69.4
301.9	Unspecified personality disorder	8,210	1.4	70.8
307.81	Tension headache	7,102	1.2	72.1
309.9	Unspecified adjustment reaction	6,029	1.1	73.1

a. Based on first listed mental health diagnosis that determined selection of the ambulatory visit record for inclusion.

The relative case mix of mental health visits within the Navy's mental health specialty clinics was approximately 43 percent mental health conditions, 27 percent substance abuse visits, and 28 percent other conditions (see table 12). In contrast, within the Navy's primary care clinics, about 40 percent of the visits were for mental health conditions, 6 percent for substance abuse, and over half (52 percent) for some other condition. Although the relative distribution of visits associated with mental health conditions was about the same in the mental health specialty and primary care clinics, the visit workload within the primary care clinics was more concentrated in cases involving stress adjustment, personality disorders, childhood disorders, and other mood, anxiety, and mental disorders. In contrast, mental health specialty clinic visits had over 10 times the number of visits for serious mental illness (such as schizophrenia, major depression, and psychoses) as primary care clinics had.

Table 12. Number and percentage of visits by type of mental health condition: mental health specialty clinics versus primary care, FY99

Category	Mental health specialty clinics		Primary care clinics	
	Number	Percentage	Number	Percentage
Mental health conditions				
Serious mental illness	38,747	13.6	3,124	1.8
Dementias and cognitive disorders	925	0.3	764	0.4
Other mental illness	84,333	29.5	65,541	38.7
Substance abuse conditions				
Any alcohol diagnosis	70,278	24.6	1,907	1.1
Any drug diagnosis	4,722	1.7	359	0.2
Tobacco use disorder	3,641	1.3	8,706	5.1
Other conditions				
Factors influencing mental health status and contact with mental health services	63,712	22.3	77,275	45.6
Psychiatric procedure	13,568	4.8	11,675	6.9
Other visits to a mental health specialty clinic	5,619	1.9	n/a	n/a
Total visits	285,545	100.0	169,351	100.0

We provide the relative distribution of ambulatory visits for mental health specialty and primary care clinics in greater clinical detail in table 13. Nearly one-quarter of the ambulatory visits in the Navy's mental health specialty clinics were for patients diagnosed with alcohol dependence during FY99. In addition, ambulatory visits for patients diagnosed with major depression, stress adjustment, and other mood disorders and anxiety, respectively, represent nearly 10 percent of total visits in the Navy's mental health specialty clinics during FY99. Mental health V-code visits were concentrated among patients receiving care for other psychosocial circumstances, other counseling not elsewhere classified, and observation for suspected mental conditions. Within primary care clinics, the largest percentage of mental health visits was for care of patients who received "other counseling, not elsewhere classified." Among those visits categorized under mental health conditions, childhood disorders and other mood and anxiety disorders made up the greatest percentage of primary care ambulatory visits.

Table 13. Number and percentage of visits^a for specific categories of mental illness, substance abuse, and other factors influencing mental health status and contact with mental health services: mental health specialty clinics versus primary care, FY99

Diagnosis	Mental health specialty clinics		Primary care clinics	
	Number	Percentage	Number	Percentage
Mental health conditions				
Serious mental illness				
Schizophrenia	2,362	0.8	85	0.1
Major depression	27,679	9.7	1,160	0.7
Other affective psychoses	6,123	2.1	818	0.5
Other psychoses	2,583	0.9	1,061	0.6
Dementias and cognitive disorders				
Alzheimer's disease	61	0.0	157	0.1
Other organic conditions	864	0.3	607	0.4
Other mental illness				
Stress adjustment	28,782	10.2	3,832	2.3
Personality disorders	13,384	4.7	235	0.1
Childhood disorders	12,557	4.4	24,785	14.6
Other mood disorders and anxiety	26,263	9.2	30,840	18.2
Other mental disorders	3,347	1.2	5,849	3.5

Table 13: Number and percentage of visits^a for specific categories of mental illness, substance abuse, and other factors influencing mental health status and contact with mental health services: mental health specialty clinics versus primary care, FY99 (continued)

Diagnosis	Mental health specialty clinics		Primary care clinics	
	Number	Percentage	Number	Percentage
Substance abuse conditions				
Any alcohol diagnosis				
Alcohol psychoses	319	0.1	60	0.0
Alcohol dependence/nondependent abuse	69,959	24.5	1,847	1.1
Any drug diagnosis				
Drug psychoses and mood disorders	110	0.0	35	0.0
Drug dependence/nondependence abuse	4,612	1.6	324	0.2
Tobacco use disorder	3,641	1.3	8,706	5.1
Factors influencing mental health status and contact with mental health services				
Personal history of mental disorder	319	0.4		
Mental and behavioral problems	40	0.0		
Other family circumstances	9,692	11.7		
Other psychosocial circumstances	22,028	26.6		
Psychological trauma				
Psychiatric condition				
Person feigning illness				
Other counseling, not elsewhere classified				
Convalescence and palliative care following psychotherapy and other treatment for mental disorder				
Follow-up exam following psychotherapy and other treatment for mental disorder				
Observation for suspected mental conditions				
Observation following alleged rape/ seduction				
Special screening for mental disorders and developmental handicaps	2,583	3.1		
Other diagnosis				

a. Based on the first listed mental health diagnosis that determined selection of the ambulatory visit record for inclusion in our analytical database.

For the most part, the workload for the Navy mental health specialty clinics reflects more severe cases requiring more intensive care, whereas the primary care clinics' mental health workload is less severe requiring less intensive care. However, of particular interest is the occurrence of visits (approximately 22 percent) involving factors influencing mental health status and contact with mental health services within the Navy's mental health specialty clinics (the mental health V-codes). TRICARE reimbursement rules disallow coverage of comparable visits to a civilian-based mental health specialty provider, although other types of civilian providers are reimbursed for visits carrying a mental health V-code.

Conclusion and recommendations

This paper serves as a starting point for identifying and understanding patterns of mental health care in the Navy's medical treatment facilities. We start with the outpatient arena because most care occurs in this setting. The data source for this analysis is Navy Medicine's administrative visit data, collected using ADS and reported on the SADR. These data present the best available clinical record of all ambulatory encounters provided through the Navy's clinics. However, the quality of the data depends on the level of attention that Navy Medicine personnel devote to completing the data collection process; consequently, some measurement and data collection error are present in these data. Using these data for FY99, our major findings for this analysis are as follows:

- Overall, active duty members were the recipients of care associated with the majority of outpatient mental health visits. Mental health visit patients also tended to be male and between the ages of 18 and 44.
- About half of the Navy's mental health visits occurred in mental health specialty clinics, nearly 30 percent took place in primary care clinics, and the remainder were distributed among a number of different specialty clinics.
- For visits occurring in mental health specialty clinics, active duty members represented nearly four-fifths of this workload.
- Mental health visits for non-active-duty members tended to occur within the Navy's primary care clinics. These patients tended to be active duty dependent adults between the ages of 18 and 44 and children under age 18.
- The average number of visits per mental health user treated in a mental health specialty clinic was about 3 times that of a user treated in a primary care clinic.

- About 55 percent of the Navy's mental health visits were for patients with a mental disorder diagnosis. The other 45 percent of Navy mental health visits were for patients who had a mental health V-code diagnosis (40 percent), who had no mental disorder or V-code diagnosis but had received some type of psychiatric procedure (4.7 percent), or who had no mental disorder or V-code diagnosis and had received no psychiatric procedure but had a visit in a mental health specialty clinic.

Mental health V-code visits represent a sizable percentage of Navy Medicine's mental health workload. Slightly over half of the mental health V-code visits occurred in primary care clinics; the remainder took place in the Navy's mental health specialty clinics. It is important to realize that similarly coded visits are not covered by the MHS benefit when beneficiaries receive their treatment from a civilian provider. Meeting the demand for this type of care within the Navy's clinics essentially uses direct care resources that might otherwise be devoted to treating patients with more serious mental health conditions. Although I do not address the issue of cost in this report, there are real cost implications associated with providing care for patients with V-code conditions in-house while referring patients with more severe conditions to civilian providers under TRICARE coverage. In addition, while being sensitive to the many issues that require active duty members to receive their health care in the Navy's facilities, I recommend that the Navy consider alternate, less costly sources of care for patients, whether they are active duty or non-active-duty members, with V-code conditions.

Finally, this analysis provides a basis for thinking about further research. It paints a partial picture of the provision of mental health services in the Navy's de facto mental health care system. We recommend further research to broaden the scope of understanding the demand and use of mental health services, to include the Navy and Marine Corps' human services sectors (i.e., use of the Navy's Family Service Centers, Chaplain Corps religious counseling services, and PREVENT) and voluntary support networks. In addition, further research on the epidemiology of mental health treatment for patients at Navy facilities would provide useful information on current care processes and would identify areas that could benefit from more efficient use of mental health specialty resources.

Appendix A: The TRICARE mental health benefit when using the civilian provider network

The TRICARE mental health benefit covers both inpatient and outpatient services that are medically or psychologically necessary to treat a covered mental disorder. Individual, group and family psychotherapy, collateral visits and psychological testing are available benefits within prescribed frequency and duration limits.

Patients have a variety of options regarding the types of providers they may see for diagnosis and treatment of mental health conditions. TRICARE authorized providers include primary care providers, psychiatrists, licensed clinical psychologists (at doctoral level), licensed clinical social workers (at master's level of education), certified psychiatric nurse specialists, certified marriage and family therapists, certified pastoral counselors, and certified mental health counselors. In addition, TRICARE requires physician referral and supervision of pastoral and mental health counselors.

TRICARE covers both individual and group outpatient psychotherapy. Beneficiaries may self-refer for their first eight mental health visits and do not need to receive a referral from their primary care manager or authorization from the local TRICARE service center for coverage of these sessions. After the eighth visit, authorization is necessary for continued coverage. The intended goal is to give beneficiaries increased access to care and privacy. As discussed later in this report, however, beneficiary self-referrals to mental health specialists present communication and care challenges to primary care managers responsible for oversight of the patient's care. Examples of potential challenges include a patient receiving conflicting advice from different providers or an internal medicine physician unknowingly prescribing a drug that interacts adversely with an antidepressant that the patient also is taking.

Acute inpatient mental health services are limited based on the patient's age at the time of admission. For patients age 19 and older, inpatient days are limited to 30 days in any fiscal year or in an admission. Patients 18 and younger are limited to 45 inpatient days in any fiscal year or in an admission. All nonemergency inpatient mental health services require care authorization before the admission.

TRICARE also covers expenses associated with care received in partial hospitalization programs. Partial hospitalization is "a time limited, ambulatory, active treatment, that offers therapeutically intensive, coordinated, and structured clinical services" [16]. Partial hospitalization requires authorization and is a covered benefit when medical or psychological necessity conditions are met. The intent of this benefit is to provide quality care at less expense than the full hospitalization rate and to allow more efficient use of mental health resources.

Residential treatment facilities (RTCs) are another alternative source of mental health care under the TRICARE benefit. Established as a benefit in FY91 [17], the RTC is viewed as a less expensive source of mental health services compared to inpatient hospitalization. These facilities exist specifically for 24-hour psychiatric treatment of children and adolescents up to age 21. TRICARE regulations require preauthorization of an admission to an RTC.

Emergency and inpatient hospital care for complications of alcohol and drug abuse or dependency and detoxification are covered as for any other medical conditions. Coverage includes detoxification, rehabilitation, and outpatient care provided in authorized substance use disorder rehabilitation facilities. Each beneficiary may receive up to three substance use disorder treatment benefit periods in his or her lifetime. A benefit period begins with the first date of covered treatment and ends 365 days later, regardless of the total services actually used within the benefit period. Effectively, the TRICARE mental health benefit limits beneficiary use to 3 years, regardless of whether the 365-day periods fall consecutively or not. These services are also subject to visit limits and require preauthorization in nonemergent situations.

Appendix B: Defining mental health visits

In tables 14 through 16, I provide the relevant diagnosis and procedure codes that I used to define mental health visits.

Table 14. Diagnoses for mental disorders

Description	Diagnosis code
Organic psychotic conditions (290-294)	
Senile and presenile organic psychotic conditions	290
Alcoholic psychoses	291
Drug psychoses	292
Transient organic psychotic conditions	293
Other organic psychotic conditions (chronic)	294
Other psychoses (295-299)	
Schizophrenic disorders	295
Affective psychoses	296
Paranoid states	297
Other non-organic psychoses	298
Psychoses with origin specific to childhood	299
Neurotic disorders, personality disorders, and other nonpsychotic mental disorders (300-316)	
Neurotic disorders	300
Personality disorders	301
Sexual deviations and disorders	302
Alcohol dependence syndrome	303
Drug dependence	304
Nondependent drug abuse	305
Physiological malfunction arising from mental factors	306
Special symptoms or syndromes, not elsewhere classified	307
Acute reaction to stress	308
Adjustment reaction	309
Specific nonpsychotic mental disorders due to organic brain damage	310

Table 14. Diagnoses for mental disorders (continued)

Description	Diagnosis code
Depressive disorder not elsewhere classified	311
Disturbance of conduct, not elsewhere classified	312
Disturbance of emotions specific to childhood and adolescence	313
Hyperkinetic syndrome of childhood	314
Specific delays in development	315
Psychotic factors associated with diseases classified elsewhere	316

Source: [11]

Table 15. Supplementary classification of factors influencing mental health status and contact with mental health services (mental health V-codes)

Description	V-code
Personal history of mental disorder	V11
Personal history of psychological trauma, presenting hazards to health	V15.4
Family history of psychiatric condition	V17.0
Mental & behavioral problems	V40
Other family circumstances	V61
Other psychosocial circumstances (unemployment, educational handicap, violence)	V62
Person feigning illness	V65.2
Other counseling, not elsewhere classified	V65.4
Convalescence following psychotherapy & other treatment for mental disorder	V66.3
Follow-up examination following psychotherapy and other treatment of mental illness	V67.3
General psychiatric examination, requested by authority	V70.1
General psychiatric examination, other and unspecified	V70.2
Examination for medico-legal reasons	V70.4
Observation for suspected mental condition	V71.0
Observation following alleged rape or seduction	V71.5
Screening for depression	V79.0
Screening for alcoholism	V79.1
Screening for other specified mental disorders and developmental handicaps	V79.8
Screening for unspecified mental disorder and developmental handicap	V79.9

Source: [11]

Table 16. Psychiatry procedure codes

Description	CPT-4 code
Psychiatry Diagnostic or Evaluative Interview Procedures	
Psychiatric diagnostic interview examination	90801
Interactive psychiatric interview examination using play equipment, physical devices, language interpreter, or other mechanisms of communication	90802
Psychiatric Therapeutic Procedures	
Individual psychotherapy, insight oriented, behavior modifying and/or supportive, in an office or outpatient facility, approximately 20 to 30 minutes face-to-face with the patient	90804
Individual psychotherapy, insight oriented, behavior modifying and/or supportive, in an office or outpatient facility, approximately 20 to 30 minutes face-to-face with the patient with medical evaluation and management services	90805
Individual psychotherapy, insight oriented, behavior modifying and/or supportive, in an office or outpatient facility, approximately 45 to 50 minutes face-to-face with the patient	90806
Individual psychotherapy, insight oriented, behavior modifying and/or supportive, in an office or outpatient facility, approximately 45 to 50 minutes face-to-face with the patient with medical evaluation and management services	90807
Individual psychotherapy, insight oriented, behavior modifying and/or supportive, in an office or outpatient facility, approximately 75 to 80 minutes face-to-face with the patient	90808
Individual psychotherapy, insight oriented, behavior modifying and/or supportive, in an office or outpatient facility, approximately 75 to 80 minutes face-to-face with the patient with medical evaluation and management services	90809
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an office or outpatient facility, approximately 20 to 30 minutes face-to-face with the patient	90810
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an office or outpatient facility, approximately 20 to 30 minutes face-to-face with the patient with evaluation and management services	90811
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an office or outpatient facility, approximately 45 to 50 minutes face-to-face with the patient	90812

Table 16. Psychiatry procedure codes (continued)

Description	CPT-4 code
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an office or outpatient facility, approximately 45 to 50 minutes face-to-face with the patient with evaluation and management services	90813
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an office or outpatient facility, approximately 75 to 80 minutes face-to-face with the patient	90814
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an office or outpatient facility, approximately 75 to 80 minutes face-to-face with the patient with evaluation and management services	90815
Individual psychotherapy, insight oriented behavior modifying and/or supportive, in an inpatient hospital, partial hospital or residential care setting, approximately 20 to 30 minutes face-to-face with the patient	90816
Individual psychotherapy, insight oriented behavior modifying and/or supportive, in an inpatient hospital, partial hospital or residential care setting, approximately 20 to 30 minutes face-to-face with the patient with medical evaluation and management services	90817
Individual psychotherapy, insight oriented behavior modifying and/or supportive, in an inpatient hospital, partial hospital or residential care setting, approximately 45 to 50 minutes face-to-face with the patient	90818
Individual psychotherapy, insight oriented behavior modifying and/or supportive, in an inpatient hospital, partial hospital or residential care setting, approximately 45 to 50 minutes face-to-face with the patient with medical evaluation and management services	90819
Individual psychotherapy, insight oriented behavior modifying and/or supportive, in an inpatient hospital, partial hospital or residential care setting, approximately 75 to 80 minutes face-to-face with the patient	90821
Individual psychotherapy, insight oriented behavior modifying and/or supportive, in an inpatient hospital, partial hospital or residential care setting, approximately 75 to 80 minutes face-to-face with the patient with medical evaluation and management services	90822
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an inpatient hospital, partial hospital or residential care setting, approximately 20 to 30 minutes face-to-face with the patient	90823

Table 16. Psychiatry procedure codes (continued)

Description	CPT-4 code
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an inpatient hospital, partial hospital or residential care setting, approximately 20 to 30 minutes face-to-face with the patient with evaluation and management services	90824
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an inpatient hospital, partial hospital or residential care setting, approximately 45 to 50 minutes face-to-face with the patient	90826
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an inpatient hospital, partial hospital or residential care setting, approximately 45 to 50 minutes face-to-face with the patient with evaluation and management services	90827
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an inpatient hospital, partial hospital or residential care setting, approximately 75 to 80 minutes face-to-face with the patient	90828
Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of nonverbal communication, in an inpatient hospital, partial hospital or residential care setting, approximately 75 to 80 minutes face-to-face with the patient with evaluation and management services	90829
Psychoanalysis	90845
Family psychotherapy (without the patient present)	90846
Family psychotherapy (conjoint psychotherapy) (with patient present)	90847
Multiple-family group psychotherapy	90849
Group psychotherapy (other than of a multiple-family group)	90853
Interactive group psychotherapy	90857
Pharmacologic management, including prescription, use, and review of medication with no more than minimal medical psychotherapy	90862

Table 16. Psychiatry procedure codes (continued)

Description	CPT-4 code
Narcosynthesis for psychiatric diagnostic and therapeutic purposes (e.g., sodium amobarbital (Amytal) interview)	90865
Electroconvulsive therapy (includes necessary monitoring); single seizure	90870
Electroconvulsive therapy (includes necessary monitoring); multiple seizures, per day	90871
Individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with the patient), with psychotherapy (e.g. insight oriented, behavior modifying or supportive psychotherapy); approximately 20-30 minutes	90875
Individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with the patient), with psychotherapy (e.g. insight oriented, behavior modifying or supportive psychotherapy); approximately 45-50 minutes	90876
Hypnotherapy	90880
Environmental intervention for medial management purposes on a psychiatric patients behalf with agencies, employers, or institutions	90882
Psychiatric evaluation of hospital records, other psychiatric reports, psychometric and/or projective tests, and other accumulated data for medical diagnostic purposes	90885
Interpretation or explanation of results of psychiatric, other medical examinations and procedures, or other accumulated data to family or other responsible persons, or advising them how to assist patient	90887
Preparation of report of patient psychiatric status, history, treatment, or progress (other than for legal or consultative purposes) for other physicians, agencies, or insurance carriers	90889
Unlisted psychiatric service or procedure	90899
Psychological testing (includes psychodiagnostic assessment of personality, psychopathology, emotionality, intellectual abilities, e.g., WAIS-R, Rorschach, MMPI) with interpretation and report, per hour	96100
Psychological testing (includes psychodiagnostic assessment of personality, psychopathology, emotionality, intellectual abilities, e.g., WAIS-R, Rorschach, MMPI) with interpretation and report, per hour	96100

Table 16. Psychiatry procedure codes (continued)

Description	CPT-4 code
Assessment of aphasia (includes assessment of expressive and receptive speech and language function, language comprehension, speech production ability, reading, spelling, writing, e.g., by Boston Diagnostic Aphasia Examination) with interpretation and report, per hour	96105
Developmental testing; limited (e.g., Developmental Screening Test II, Early Language Milestone Screen), with interpretation and report	96110
Developmental testing; extended (includes assessment of motor language, social, adaptive and/or cognitive functioning by standardized developmental instruments, e.g., Bayley Scales of Infant Development) with interpretation and report, per hour	96111
Neurobehavioral status exam (clinical assessment of thinking, reasoning, and judgment, e.g., acquired knowledge, attention, memory, visual spatial abilities, language functions, planning) with interpretation and report, per hour	961165
Neuropsychological testing battery (e.g., Halstead-Reitan, Luria, WAIS-R) with Interpretation and report, per hour	96117

Source: [12].

Appendix C: Categorizing types of Navy facilities

Table 17 shows how I defined facility categories using their DMIS identifier.

Table 17. Definition of facility categories

Facility category and name	DMIS identifier
Medical centers	
NMC San Diego	0029
NNMC Bethesda	0067
NMC Portsmouth	0124
Family practice naval hospitals	
NCH Camp Pendleton	0024
NCH Pensacola	0038
NCH Jacksonville	0039
NCH Bremerton	0126
Navy community hospitals	
NCH Lemoore	0028
NCH Twentynine Palms	0030
NCH Great Lakes	0056
NCH Camp Lejeune	0091
NCH Cherry Point	0092
NCH Beaufort	0104
NCH Oak Harbor	0127
Navy ambulatory care clinics	
NACC Port Hueneme	0026
NACC Groton	0035
NACC Newport	0100
NCH Charleston	0103

Table 17. Definition of facility categories (continued)

Facility category and name	DMIS identifier
NCH Corpus Christi	0118
NACC New Orleans	0297
NACC Portsmouth, NH	0321
NACC Kings Bay	0337
NMCL Patuxent River	0068
NMCL Oak Harbor	0280
NMCL Annapolis	0306
NMCL Quantico	0385
Branch clinics	
NBMC Dam Neck	0382
NBMA Arlington Annex	0384
BRMCL Camp Delmar MCB	1657
BRMCL San Onofre MCB	1659
BRMCL Camp Geiger MCB	1662
BRMCL Camp Johnson MCB	1663
BRMCL Courthouse Bay MCB	1664
BRMCL OCS Brown Field	1670
BRMCL The Basic School	1671
BRMCL Corcen MCB	1975
BRMCL Building 15 MCB Camp Lejeune	1992
BRMCL Corfac MCB Camp Lejeune	1994
BRMCL French Creek MCB	1995
NBMC Colts Neck Earle Pier-side	7278
BMC NSA Memphis	0107
BRMCL MCB Camp Pendleton	0208
NBMC Barstow	0209
BRMCL Edson Range Annex	0210
BRMCL NAVWPNCEN China Lake	0212
BRMCL NAS Point Mugu	0217
NBMC MCRD San Diego	0230
NBMC NAS North Island	0231
NBMC NAS Miramar	0232
NBMC Coronado	0233
BRMCL NAS Pensacola	0260
NBMC Milton Whiting Field	0261
Naval Aviation Tech-Pensacola	0262
BRMCL NAVCAOSTSYSC Panama City	0265

Table 17. Definition of facility categories (continued)

Facility category and name	DMIS identifier
BRMCL NAS Jacksonville	0266
NBMC Yuma	0269
NBMC Albany	0275
NBMC Athens	0276
NBMC Marietta	0277
BRMCL NS Barbers Point	0281
BRMAX NAVCAMS EastPAC	0284
BRMCL MCAS Kaneohe Bay	0285
BRMCL NAS Brunswick	0299
NBMC Indian Head	0301
NBMC Gulfport	0316
NBMC Meridian	0317
NBMC Fallon	0319
NBMC Colts Neck Earle-Main	0322
NBMC Ballston SPA	0328
BRMCL MCAS New River	0333
NBMC Willow Grove	0347
NBMC Mechanicsburg	0348
BRMCL MCRD Parris Island	0358
BRMCL MCAS Beaufort	0360
NBMC Kingsville	0369
NBMC Little Creek	0378
NBMC NSY Norfolk	0380
NBMC Yorktown	0381
NBMC Dahlgren	0386
NBMC Oceana	0387
NBMC Keyport	0397
NBMC Puget Sound	0398
NBMC Lakehurst	0401
NBMC Mayport	0405
NBMC NTC San Diego	0407
NBMA NALF San Clemente	0414
BRMCL NAS Belle Chase	0436
NBMC NAVSTA Sewells	0508
BRMCL WPNSTA Charleston	0511
BRMCL NAVTECHTRACEN Pensacola	0513
NBMC NAVSEC Washington	0515
NBMC Key West	0517

Table 17. Definition of facility categories (continued)

Facility category and name	DMIS identifier
BRMAX NCTC Great Lakes	0518
NBMC Chesapeake	0519
NBMC Andrews AFB	0522
BRMCL NSY Pearl Harbor	0528
NBMA Pascagoula	0654
NCHBC Ingleside	0656
NBMC NAVSTA San Diego	0701
NBMC Washington Navy Yard	0703
Camp Kinser Okinawa	1269
BRMCL Subase Bangor	1656
BRMCL NCTC INPR Great Lakes	1660
BRMCL NTC Great Lakes	1959
BRMCL MCB Camp HM Smith	1987
BRMCL NAVSUPACT East Bank	1990
NMCL Everett	7138
Primary care NAVCARE Camp Lejeune	6205
TRICARE Outpatient San Diego 1	6207
TRICARE Outpatient CL VA Beach	6214
TRICARE Outpatient San Diego 2	6215
Navy NAVCARE Clinic Vista	6216
TRICARE Outpatient Chesapeake	6221
Camp Lejeune-MCS-PCM	8007
OCONUS facilities	
NCH Guantanamo Bay	0615
NCH Roosevelt Roads	0616
NCH Naples	0617
NCH Rota	0618
NCH Guam	0620
NCH Okinawa	0621
NCH Yokosuka	0622
NCH Keflavik	0623
NMCL London	8931
BMC Iwakuni	0625
BRMCL COMFLEACT Sasebo	0852
BRMCL NAF Atsugi	0853
BRMCL La Maddalena	0855
BRMCL MCAS Futenma	0861

Table 17. Definition of facility categories (continued)

Facility category and name	DMIS identifier
BRMCL Camp Foster	0862
BRMCL NAVSTA Guam	0871
BRMCL NAVCAMS WESTPAC Guam	0872
BRMCL Gaeta	0874
BRMCL NAV Capodichino	1153
BRMCL NAVWPNSFAC St. Mawgan	1179
BRMCL Camp Bush/Courtney	7032
NMCL Camp Hansen-Okinawa	7033
BRMCL Camp Schwab-Okinawa	7107
BRMCL MCAS Torii Station	7112
BMA Hario Sesebo	7288
BRCL NAF Kadena	8935

Appendix D: Categorizing mental health conditions

In table 18, I provide the criteria that I use to categorize the following mental health and substance abuse conditions:

- Serious mental illness
- Dementia and cognitive disorders
- Other mental illness
- Any alcohol diagnosis
- Any drug diagnosis.

Table 18. Diagnoses that identify persons with mental health and substance abuse problems

Diagnosis	ICD-9-CM codes
Mental health conditions	
Serious mental illness	
Schizophrenia	295
Major depression	296.2, 296.3
Other affective psychoses	296.0, 296.1, 296.4-296.99
Other psychoses	297, 298, 299
Dementias and cognitive disorders	
Alzheimer's disease	290
Other organic conditions	293, 294
Other mental illness	
Stress adjustment	308, 309
Personality disorders	301, excluding 301.13
Childhood disorders	307, 312-314
Other mood disorders and anxiety	300, 301.13, 311
Other mental disorders	302, 306, 310, 315, 316

Table 18. Diagnoses that identify persons with mental health and substance abuse problems (continued)

Diagnosis	ICD-9-CM codes
<hr/> Substance abuse conditions	
Any alcohol diagnosis	
Alcohol psychoses	291
Alcohol dependence/nondependent abuse	303, 305.0
Any drug diagnosis	
Drug psychoses and mood disorders	292
Drug dependence/nondependent abuse	304, 305.2-305.9
Tobacco use disorder	305.1

Source: Adapted from [15].

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